154541 11/3/7 Signed

Declaration for the Record of Decision Amendment

Site Name and Location

Northside Sanitary Landfill, Zionsville, Indiana

Statement of Basis and Purpose

This decision document, together with a Record of Decision dated September 25, 1987, represents the selected remedial action for the Northside Sanitary Landfill developed in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended by the Superfund Amendments and Reauthorization Act of 1986 (SARA), and to the extent practicable, the National Oil and Hazardous Substances Pollution Contingency Plan (NCP).

This decision is based on the contents of the administrative record for the Northside Sanitary Landfill site. The attached index identifies the items which comprise the administrative record upon which the decision to amend the 1987 Record of Decision, and the selection of the modified remedial action is based.

The State of Indiana concurs in the remedy selected by U.S. EPA for the Northside Sanitary Landfill site.

Description of the Remedy

The primary reason for amending the 1987 Record of Decision is to reflect the decision to implement separate, complementary remedies for the Environmental Conservation and Chemical Corporation and Northside Sanitary Landfill sites, instead of the one combined remedy selected in the 1987 Record of Decision, and secondarily, to modify the selected remedy.

For the Northside Sanitary Landfill site, the major components of the remedial action as modified, include:

- Access restrictions

- RCRA Subtitle C cap and gas venting system

- Hydraulic isolation wall south and west of NSL and north of Finley Creek

- Leachate collection trench north, northwest and east of NSL

- Combined ground-water and leachate collection trench south and southwest of NSL

- Pipeline to the Indianapolis Department of Public Works sewer system, and treatment of the ground-water and leachate at the Indianapolis publicly-owned treatment works (POTW) or

elsewhere in the event that the POTW is unavailable

- Ground-water, surface-water, and leachate monitoring program.

Declaration

The selected remedy, as modified herein, is protective of human health and the environment, attains Federal and State requirements that are applicable or relevant and appropriate to this remedial action, and is cost-effective.

This remedy satisfies the statutory preference for remedies that employ treatment, that reduce toxicity, mobility or volume as a principal element, and utilize permanent solutions and alternative treatment technologies to the maximum extent practicable.

Because this remedy will result in hazardous substances remaining on-site, pursuant to Section 121(c) of CERCLA, a review will be conducted at the site within five years after commencement of the remedial action and at least every five years thereafter to ensure that the remedy continues to provide adequate protection of human health and the environment.

July 31, 1991
Date

FOR Valdas V. Adamkus
Regional Administrator
Region V

Record of Decision Amendment
Northside Sanitary Landfill

I. LOCATION AND DESCRIPTION

The Northside Sanitary Landfill (NSL) and the Environmental Conservation and Chemical Corporation (also referred to as Enviro-Chem, or ECC) facilities are both on the Superfund National Priorities List, and are located adjacent to each other. On September 25, 1987, a Record of Decision (ROD) was signed which selected a combined remedy for the two sites. Since the time the original ROD was signed, U. S. EPA and the State of Indiana have engaged in negotiations with Potentially Responsible Parties (PRPs) for each site. These negotiations have resulted in separate remedies for each site, individual Consent Decrees for each site, and this amendment to the 1987 ROD. The purpose of this ROD Amendment is to describe the changes from the remedy selected in the 1987 ROD, as they pertain to NSL.

The NSL site is located in a rural area of Boone County, about five miles north of Zionsville and ten miles northwest of Indianapolis. Farmland borders the southern and eastern edge of NSL. Residential properties are located to the north and west, within one-half mile of the facility. A small residential community, Northfield, is located north of the site on U. S. 421. Approximately fifty residences are located within one mile of the site.

An unnamed ditch runs north to south between the NSL and ECC sites, along the western edge of NSL, and joins Finley Creek at the southwestern corner of the NSL landfill. Finley Creek runs along the eastern and southern edges of the NSL site and flows into Eagle Creek about one-half mile downstream from the sites. Eagle Creek flows south from its confluence with Finley Creek for ten miles before it empties into Eagle Creek Reservoir. The reservoir supplies approximately six percent of the drinking water for the City of Indianapolis.

II. SITE HISTORY AND ENFORCEMENT ACTIVITIES

The 1987 ROD sets forth a summary of the history of NSL, through the time of its issuance. Since the ROD was issued, the following activities of pertinence have occurred.

1. NSL took an appeal to the February 1987 administrative order issued by the Solid Waste Management Board (SWMB). Though the State trial court affirmed the administrative order, its effect has been stayed pending NSL's further appeal to the Indiana State Appellate Court. As a result, NSL has continued to receive waste and to operate as a solid waste landfill. Consequently, the contours and dimensions of the landfill are now different from those which existed at the time the 1987 ROD was issued.

2. NSL's challenge to its inclusion on the National Priorities List was denied by the United States Supreme Court in March 1989.

3. In February 1988, U.S. EPA filed a complaint in the United States District Court for the Southern District of Indiana which sought to enjoin NSL from denying, restricting or impeding entry and access to the landfill for the purposes of taking response actions under CERCLA. Specifically, U.S. EPA moved the Court to enjoin the defendants from further landfilling operations at the Northside Sanitary Landfill. In April, 1988, the Court denied U.S. EPA's motion, though the action remains pending.

4. As a result of the testing of soils from an uncontaminated area conducted as a part of the predesign studies, U.S. EPA found that the clay till, general fill material, and top soil from said area would be suitable for use in the construction and maintenance of the landfill cap.

5. In February 1988, a group of potentially responsible parties (PRPs) who sent or transported hazardous substances to NSL offered to perform a portion of the 1987 ROD selected remedy. After lengthy negotiations, U.S. EPA, the State of Indiana, and this group of PRPs have reached a tentative agreement concerning a remedy to be implemented at NSL, as described in this Amendment, and as more fully set forth in a Consent Decree and Statement of Work included in the Administrative Record.

6. The PRPs propose to use the Indianapolis wastewater treatment plant, instead of an onsite treatment plant, to treat contaminated ground water and leachate from NSL. This amendment to the ROD approves this alternative for the following reasons. First, a careful analysis of Indianapolis' ordinance regulating discharges to public sewers, and the chemical analysis of leachate samples from NSL collected in February 1988 have revealed that pretreatment would not be necessary. Second, the sewer connection moratorium for the northern part of Marion County into the Belmont Wastewater Treatment Plant was lifted in September, 1987. Third, an analysis of Indianapolis' "Mass Flow Monitoring Study" has revealed that surcharges and overflows will not be a problem.

III. COMMUNITY RELATIONS

This ROD Amendment, as proposed, was available for public comment for a thirty day period, pursuant to Section 117 of CERCLA. An Administrative Record containing documents of relevance to this Amendment has been available at the Zionsville Town Hall and at the offices of Region V, U.S. EPA in Chicago.

IV. DOCUMENTATION OF SIGNIFICANT CHANGES

This ROD Amendment addresses those elements of the remedy which

have changed from the 1987 ROD and the requirements and preferences under SARA. Many elements of the original 1987 ROD do not change. Therefore, the findings made in the 1987 ROD remain the same except for the changes described in this ROD Amendment.

The major differences between the remedy selected in the 1987 ROD for NSL and the remedy selected in this Amendment are as follows:

1. This Amendment to the ROD provides for separate remedies for NSL and ECC, instead of the combined remedy selected in the 1987 ROD.

2. This Amendment approves construction of a pipeline to the Indianapolis sewer system so that treatment of contaminated ground water and leachate can be done at the City of Indianapolis' wastewater treatment plant. If the plant cannot be used for any reason, the ROD Amendment retains as contingencies an on-site treatment plant and discharge to Finley Creek pursuant to an NPDES permit, as selected in the 1987 ROD; or use of another available wastewater treatment plant; or some other alternative consistent with the Clean Water Act.

3. To minimize uncontaminated ground water from entering the collection trench, a hydraulic isolation system will be constructed downgradient of the collection system, as provided in this ROD Amendment. The 1987 ROD remedy provided for the same goal to be accomplished through different construction details of the trench itself. This modification will be just as effective.

4. The 1987 ROD called for the rerouting of surface waters to reduce the potential for contaminant movement to surface water. The hydraulic isolation system selected in this ROD Amendment makes this task unnecessary.

5. This Amendment adds ammonia and chloride, as shown in Attachment 1, to the list of contaminants set forth on Table 1 of the 1987 ROD. This remedy, as amended, is intended to prevent ammonia and chloride from being discharged into Finley Creek at levels above those set forth.

6. This Amendment concludes that uncontaminated clay till, general fill material, and top soil located in the borrow area, which was investigated as a part of the predesign studies, are suitable for use in constructing and maintaining the landfill cap.

The second item above was evaluated in the Feasibility Study for NSL, but was not selected in the 1987 ROD. However, due to changed conditions at the Indianapolis wastewater treatment plant,

specifically the condition of the receiving sewers, and the determination by the Indianapolis Department of Public Works that pretreatment of NSL contaminated ground water and leachate is not needed, the pipeline alternative has become more cost-effective.

Key portions of the remedy which remain the same from the 1987 ROD are summarized below:

- Access restrictions remain part of the remedy.
- A RCRA-performance cap and gas venting system will be constructed over the landfill to prevent direct contact, and to minimize infiltration.
- Contaminated leachate and ground water will be collected in a trench system.
- Ground-water, surface-water and leachate monitoring remain part of the remedy.

This ROD Amendment selects separate and distinct remedies for NSL and ECC. During the design phase for each remedy, however, efforts will be made to ensure that the two remedies will be compatible with each other.

SUMMARY

NORTHSIDE SANITARY LANDFILL
DIFFERENCES BETWEEN 1987 REMEDY AND REMEDY, AS MODIFIED

1987 REMEDY	MODIFIED REMEDY
Combined remedy for NSL	Separate, compatible remedies for ECC and NSL
On-site treatment plant to treat contaminated ground water and leachate and discharge to Finley Creek pursuant to NPDES permit	Pipeline to convey contaminated ground water and leachate to the City of Indianapolis' sewer system
Impermeable barrier along the downgradient side of the collection trench to minimize inflow of water from the creek	Construction of hydraulic isolation barrier in same general location
27 contaminants to be monitored for	29 contaminants to be monitored for

Table 1 is a summary comparison of the 1987 ROD remedy and the remedy, as modified herein, relative to the Agency's nine evaluation criteria. Figure 1 shows some components of the remedial action selected in this ROD Amendment. The technical attachment to the Consent Decree, called the Statement of Work, which is in the Administrative Record, provides more details regarding the remedial action selected in this ROD Amendment.

VI. STATUTORY DETERMINATIONS

U.S. EPA has determined, and the Indiana Department of Environmental Management concurs, that the modified remedy selected herein satisfies the statutory requirements specified in Section 121 of SARA: to protect human health and the environment; to attain ARARs; and to utilize permanent solutions and alternative treatment technologies to the maximum extent practicable.

Protection of Human Health and the Environment

Because the modified remedy embodies the same basic remedial technologies that comprised the 1987 remedy - an impermeable cap and ground water collection and treatment - the modified remedy remains protective of human health and the environment.

Attainment of Applicable, or Relevant and Appropriate Requirements

Section 121(d) of SARA requires that remedial actions meet legally applicable or relevant and appropriate requirements (ARARs) of other environmental laws. These laws may include: the Resource Conservation and Recovery Act (RCRA), the Clean Water Act (CWA), the Safe Drinking Water Act (SDWA), the Clean Air Act (CAA), the Toxic Substances Control Act (TSCA), and in some cases State law. A "legally applicable" requirement is one which would legally apply to the response action if that action were not taken pursuant to Section 104 or Section 106 of CERCLA. A "relevant and appropriate" requirement is one that, while not legally applicable to the remedial action, addresses problems or situations sufficiently similar to those encountered at the site that their use is well suited to the remedial action.

The ARARs that were identified in the 1987 ROD remain the ARARs for the modified remedy, with one change. That change concerns the method for treatment of collected ground water and leachate. Because the 1987 ROD called for an on-site treatment plant, the discharge of treated effluent from that plant to Finley Creek would have been regulated through the National Pollutant Discharge Elimination System under the Clean Water Act. The modified remedy approves use of a pipeline to carry contaminated ground water and leachate to the City of Indianapolis' sewer system and treatment by its wastewater treatment plant. As a consequence the national pretreatment program under the Clean Water Act becomes an ARAR for the discharge of NSL effluent to the City sewer system. The City's

sewer use ordinance which sets forth an approved pretreatment program will also apply to the NSL effluent.

Cost-Effectiveness

The modified remedy is as protective, offers greater long term effectiveness and is more cost effective than the 1987 ROD selected remedy. The capital outlay to construct a pipeline from the facility to the IDPW sewer system is less than that required to construct an onsite treatment plant. Likewise, the operation and maintenance costs associated with the former method are less than those required for the latter.

Utilization of Permanent Solutions and Alternative Treatment Technologies to the Maximum Extent Practicable, and Preference for Treatment as a Principal Element

As discussed in the 1987 ROD, treatment of NSL refuse would be nearly impossible because of the variety of materials, large volume, and resulting high cost.

VI. Future Actions

The Remedial Design schedule is as follows:

- Submittal of a Work Plan for Supplemental Investigations 10 weeks after work initiation;
- Submittal of the Preliminary (30%) RD Report 30 weeks after work initiation;
- Submittal of the optional Intermediate (60%) RD Report 10 weeks after receiving EPA approval of the Preliminary RD Report;
- Submittal of the Prefinal (95%) RD Report 22 weeks after receiving EPA approval of the Preliminary RD Report or 12 weeks after approval of the optional Intermediate RD Report; and
- Submittal of the Final (100%) RD Report 6 weeks after receiving EPA approval of the Prefinal Report.

The Remedial Action schedule will be developed and submitted for approval as part of the RD report.

GERAGHTY & MILLER
ENGINEERS, INC.

TABLE 2
(Page 1 of 2)

Remediation Standards for Ground Water and Leachate
Statement of Work
NSL Remediation Committee
Zionsville, Indiana

Constituent	Remedial Standard (ug/L)	Reference
1,1,1-Trichloroethane	5280	A
1,1,2-Trichloroethane	41.8	A
Chloroform	15.7	A
Benzene	40	A
Ethylbenzene	3280	A
Methylene Chloride	15.7	A
1,1-Dichloroethene	5	A
Trichloroethene	80.7	A
Tetrachloroethene	8.85	A
Toluene	3400	A
Phenol	570	A
4-Chloro-3-methyl phenol	1	A
Bis(2-ethylhexyl)phthalate	50,000	A
Vinyl chloride	525	A
1,2-Dichloroethane	243	A
Di-n-butyl phthalate	154,000	A
Diethyl phthalate	52,000	A
Dimethyl phthalate	33,000	A
Naphthalene	620	A
Arsenic	0.0175	A
Chromium(VI)	11	A

A - Selected stream criteria in Table 1 of the USEPA Record of Decision, Environmental Conservation and Chemical Corporation and Northside Sanitary Landfill Sites, Zionsville, Indiana, September 25, 1987.

B - Constituents added by the IDEM with associated values.

Attachment 1

GERAGHTY & MILLER ENGINEERS, INC.

TABLE 2
(Page 2 of 2)

Remediation Standards for Ground Water and Leachate
Statement of Work
NSL Remediation Committee
Zionsville, Indiana

Constituent	Remedial Standard (ug/L)	Reference
Copper	26	A
Cyanide	5.2	A
Iron	1000	A
Lead	10	A
Nickel	100	A
Zinc	47	A
Ammonia	1,140 (Summer)	B
	1,640 (Winter)	B
Chloride	230,000	B

A - Selected stream criteria in Table 1 of the USEPA Record of Decision, Environmental Conservation and Chemical Corporation and Northside Sanitary Landfill Sites, Zionsville, Indiana, September 25, 1987.

B - Constituents added by the IDEM with associated values.

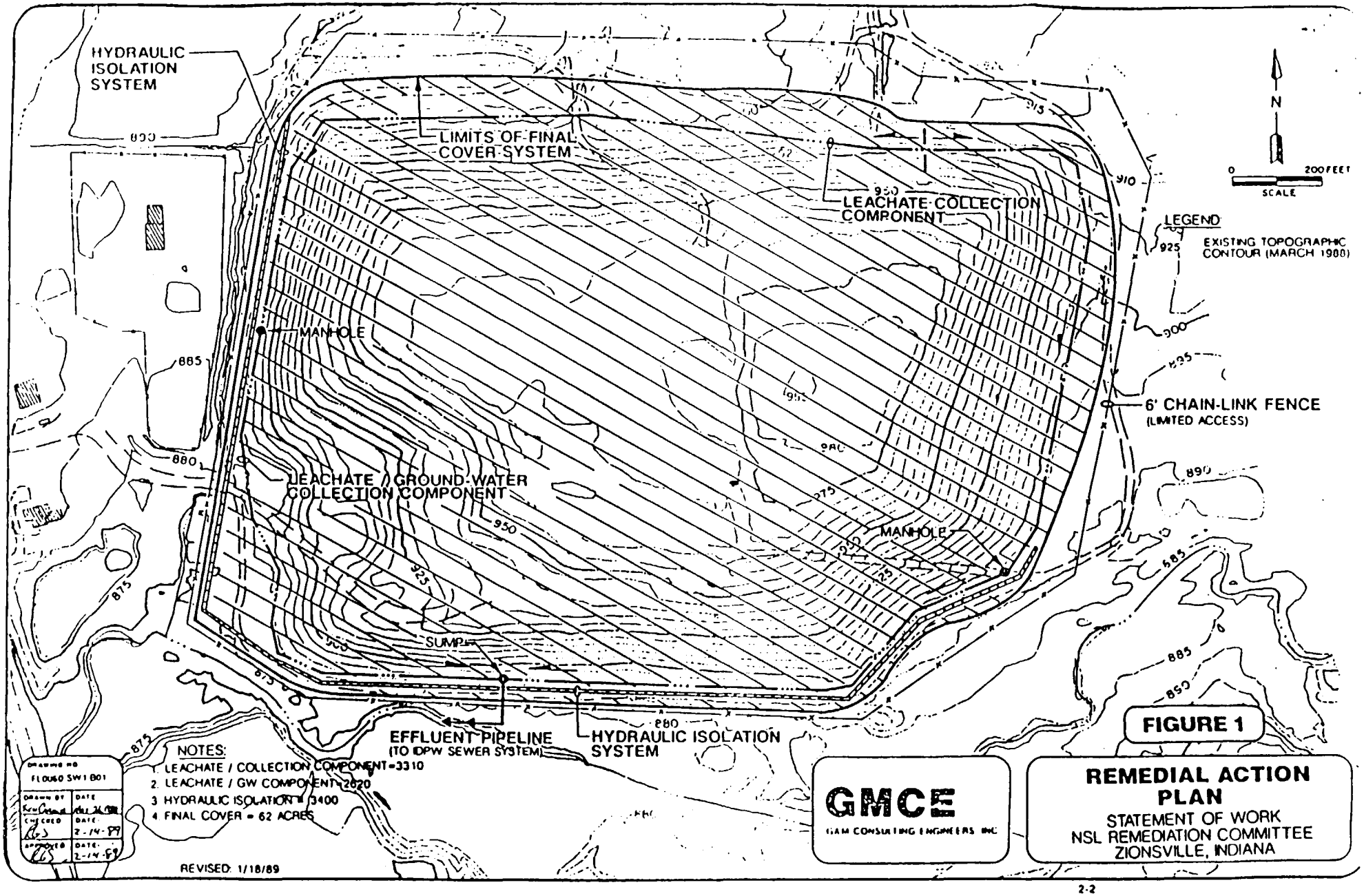
FL0060.GC1\TBL\NEWTBL2.2

Attachment 1 (continued)

TABLE 1

NORTHSIDE SANITARY LANDFILL
COMPARISON OF EVALUATION CRITERIA

	1987 REMEDY	MODIFIED REMEDY
Protection of human health and the environment	Surface water protected by ground water collection	Surface water protected by ground water collection and slurry wall
Compliance with ARARs	Compliance with off-site ARARs (Acceptable Stream Criteria)	Compliance with off-site ARARs (Acceptable Stream Criteria), plus remedial standards for ammonia and chloride
Long-term Effectiveness	Less certain, due to need to operate and maintain onsite treatment plant for a significant period of time	Less maintenance required due to use of City wastewater treatment plant
Reduction in Toxicity, Mobility and Volume	Slow reduction in volume of contaminants from ground water collection	Same as 1987 ROD
Short-term Effectiveness	Little site disturbance; little chance of releases during construction	Same as 1987 ROD
Implementability	Long-term operation and maintenance required	Same as 1987 ROD
Cost	$30.9 million	$25 to $30 Million
State Acceptance	Full acceptance	Full acceptance
Community Acceptance	Full acceptance	Acceptance indicated


HYDRAULIC ISOLATION SYSTEM
LIMITS OF FINAL COVER SYSTEM
LEACHATE COLLECTION COMPONENT
LEGEND
EXISTING TOPOGRAPHIC CONTOUR (MARCH 1988)
N
0 200 FEET
SCALE
MANHOLE
6' CHAIN-LINK FENCE
(LIMITED ACCESS)
LEACHATE / GROUND-WATER COLLECTION COMPONENT
MANHOLE
SUMP
EFFLUENT PIPELINE
(TO IDPW SEWER SYSTEM)
HYDRAULIC ISOLATION SYSTEM
NOTES:
1. LEACHATE / COLLECTION COMPONENT=3310
2. LEACHATE / GW COMPONENT=2020
3. HYDRAULIC ISOLATION = 3400
4. FINAL COVER = 62 ACRES
REVISED: 1/18/89
FIGURE 1
GMCE
GAM CONSULTING ENGINEERS INC
REMEDIAL ACTION PLAN
STATEMENT OF WORK
NSL REMEDIATION COMMITTEE
ZIONSVILLE, INDIANA

NORTHSIDE SANITARY LANDFILL
SUPERFUND SITE
ZIONSVILLE, INDIANA

RESPONSIVENESS SUMMARY
June 24, 1991

I. RESPONSIVENESS SUMMARY OVERVIEW

In accordance with CERCLA Section 117, a public comment period was held from May 20, 1991 to June 18, 1991, to allow interested parties to comment on the United States Environmental Protection Agency's (EPA's) proposed Record of Decision (ROD) amendment for the Northside Sanitary Landfill Superfund site. At a May 30, 1991 public meeting, EPA and Indiana Department of Environmental Management (IDEM) officials presented the ROD amendment for the Northside site, answered questions and solicited comments from the public. One written comment was received through the mail.

II. BACKGROUND OF COMMUNITY CONCERN

Because of the proximity of Northside Sanitary Landfill and the adjacent Enviro-Chem site, the history of community concerns reflects both sites. Concerns focused on air and water quality, especially as they relate to public health, and the timeline for the closure of Northside.

A toxic oil spill in mid-1989, caused by vandals and believed to come from tanks stored on neighboring Great Lakes Asphalt Company property, caused intensified public concern about the effects of site-related contaminants in the community. At the time, it was believed the spill could have some effect on the Eagle Creek Reservoir, from which part of Indianapolis draws drinking water. The spill was cleaned up under EPA's emergency authorities.

Ongoing concerns focus on implementation of the remedy (for instance, where the sewer pipeline will be placed) and liability of the owners/operators.

III. SUMMARY OF SIGNIFICANT COMMENTS RECEIVED DURING THE PUBLIC COMMENT PERIOD AND EPA RESPONSES

One written comment was received from a local resident; the letter is attached. The resident expressed concern that any contaminated leachate will not be separated and treated before being commingled with domestic effluent when discharged to the Indianapolis wastewater treatment system. The resident believes that Indianapolis cannot handle the type of waste it will receive from Northside, resulting in a situation where contaminants will enter the White River.

EPA's response: Allowing contaminated leachate and ground water from Northside to be treated by the Indianapolis wastewater treatment system was carefully and thoroughly examined. The Administrative Record contains a great deal of information on this subject, some of which was prepared by EPA's contractor, and some of which was submitted to us by the City of Indianapolis. We examined the requirements for discharges into the City of Indianapolis wastewater collection and treatment system. Chemical analysis of leachate

samples from Northside collected in February 1988 indicates that all contaminant concentrations are low enough that pretreatment prior to discharge to public sewers is not required (see Record of Decision Amendment Administrative Index, documents 1-4, 6, 9, 12, 13, 15, 17, 21, 22). We believe that the Indianapolis treatment plant can effectively remove the contaminants from Northside leachate and ground water.

A comment was made at the meeting suggesting EPA should put the pipeline on the west side of Highway 421.

EPA's response: The location of the pipeline has not yet been determined. This is a design detail that will be worked out with the rest of the design at a later date.

Two comments were made at the meeting suggesting EPA needs a method to isolate the uncontaminated ground water from the north and east from the contaminated leachate and ground water that will be collected and treated; an isolation system on the north and east sides of the site was suggested.

EPA's response: EPA considered an isolation system encircling the landfill in its Feasibility Study of 1986. However, based on our study of the regional ground water flow in the area, we concluded this is not necessary because the regional ground water from the north and east appear to be naturally isolated from the contamination. We believe that the regional ground water does not enter the site from the east. Furthermore, we believe that regional ground water flow from the north is deep, and goes under the site. Because it is deep, it will not become contaminated by the waste, and will not enter the collection system. All the contamination we have seen is in the shallow ground water; the deeper regional ground water is uncontaminated. In addition, in the shallow aquifer, there is an upward gradient, which means that flow is upward, so contamination cannot move downward from the shallow glacial till aquifer into the deeper uncontaminated aquifer.

A comment was made at the meeting suggesting EPA have continuous monitoring of the leachate system.

EPA's response: All dischargers to a municipal sewer system must perform monitoring on the material they are providing to the sewer system. The Northside discharge will be no different. The way monitoring will be conducted, whether continuous or on some interval, will be determined during the design of the project, and will depend, in part, on City of Indianapolis requirements.

For further information, the reader is referred to the Administrative Record and the public information repository at the Zionsville Town Hall, 110 S. 4th St., Zionsville. (Contact: Karen Martin, (312)886-6128, or (800)621-8431 (9-4:30 central time))

760 Round Court
Zionsville, IN 46077-2017
Friday, May 31, 1991

Karen Martin
Community Relations Coordinator
Office of Public Affairs, 5PA-14
U.S. Environmental Protection Agency
230 South Dearborn Street
Chicago, Illinois

Subject: ROD, Northside Sanitary Landfill, Zionsville, Indiana

Dear Karen:

Again, thanks for conducting last night's hearing in Zionsville.

I wish to enter the following additional comment. Though I spoke on the subject in the form of a question in the meeting, I am entering this comment in written form as this allows me to work carefully on the exact wording.

Comment:

It concerns me that the proposed ROD will remove the burden of separation and treatment of any contaminated leachate which will be extracted from the ground. By piping this leachate to the Northwestern corner of the Indianapolis wastewater treatment system, and allowing it to commingle with the domestic effluent of hundreds of thousands of other customers, it will be diluted far beyond the point that it can be effectively treated. This, coupled with the fact that neither of the Indianapolis treatment plants provide treatment facilities for industrial chemical wastes, leads me to believe that all we are really changing is the place at which the contaminated leachate enters the waters of the United States, that change being from the local aquifer to White River.

Unless it can be demonstrated that the Indianapolis treatment plants can effectively remove the variety of contaminants expected, in the form in which they will arrive, I believe that separation of the contaminants from groundwater should be performed on-site, and the burden of proper treatment and/or disposal of contaminants should be fairly borne by the potentially responsible parties. (end of comment)

I look forward to reading the historical prospective of the situation that will be presented by the entire series of Fact Sheets that you offered to send. Thanks for so offering.

Sincerely,

Philip L. Brown

Philip L. Brown